

**Sheet 2**

(1) Explain what will happen if the following codes have been executed:

(a) READ: MOV A, R1  
ANL A, #2H  
CJNE A, #02H, READ  
MOV R3, #FFH

(b) STAT MOV A, #01H  
JNZ STAT

(2) Find the number of bytes for each of the following instructions:

MOV A, # 45	INC R1
MOV R1, # 30	MOV R3, A
JNZ Label	ANL A, #30
ADD A, R1	ADDC A, 40
ADD A, #50	

(3) Write an assembly programs that either finds the product or sum of two numbers NUM1 and NUM2 as follows:

If NUM1 < NUM2, find the product  
If NUM1 > NUM2, find the sum.

(4) Write an assembly program that stores NUM1 continuously in 30 odd memory locations starting from the address 10H.

- (5) Write an assembly program that multiplies the number in the memory location DATA1 with itself 30 times and stores the result in the memory location DATA2.
- (6) Write an assembly program to look for a number NUM in 300 successive memory locations starting from 00H. The accumulator is either loaded with the number (if it exists) or zero.
- (7) Write assembly program that sorts (in ascending order) 3 numbers stored in memory starting from the address 60H.